APPENDIX 3

RELATIONSHIP OF FINDHORN/PILMUIR FAS TO PLANNING POLICY

The application (as amended) requires to be considered in accordance with the Moray Development Plan, in particular the adopted Moray Local Plan 2008 (MLP 2008) (Appendix 2). The ES assesses compliance against policies of the former Moray Local Plan 2000 (MLP 2000) and an emerging MLP 2008, both now superseded by the MLP 2008.

No assessment is made against Forres I2 and 14 designations (Forres Proposals Map refers), because no works (Appendix 1) are located therein. The application site boundary may abut or extend into the designations, for example, as part of access requirements for construction, but such encroachment will be temporary and limited to the construction phase.

This does not mean the Findhorn/Pilmuir FAS has no impact on these designations. The wider scope of assessment (individual and cumulative) undertaken by the ES indicates that wider benefits accrue. For example, 20% of Forres I1 (Greshop West) will be disrupted during construction and currently, all Forres I1 – I5 sites are subject to flooding. However, with the scheme in operation, only 0.2% of land will continue to flood (on Forres I1) and business uses on Forres I1 – I5 will benefit by being protected from flooding, a moderate beneficial impact according to the ES.

Although not directly affected by construction works, other land-uses and facilities in and around Forres may also benefit from protection once the scheme is in place, hence the relief from flooding will have a major beneficial impact of the local community. However, some facilities e.g. for angling and walking may experience adverse impacts with the scheme in place, not necessarily because the facilities may still flood or because they have been re-instated and/or re-aligned in the process. Instead, the appearance or amenity of the area in which they are located may have altered, for example through removal of trees/vegetation along the riverbank, some of which may not be replaced or will take time to mature and restore the appearance of the area.

Generally speaking, the Findhorn/Pilmuir FAS supports Structure Plan strategy, Policy 1 in Forres. Once implemented, the Findhorn/Pilmuir FAS will have a beneficial impact where the reduced threat of flooding upon local residential business community and transport infrastructure will help foster confidence and investment. Outwith Forres, premises may continue to be at risk but none are worse off as a result of the scheme (Appendix 5 and 6). Some roads will continue to flood, but now only approx. 83% of agricultural land (out of approx. 509 ha of land located within the 1 in 200 year event) will continue to be at risk of flooding. Although not designed to do so, the protection now afforded to some 17% of agricultural land is considered as a moderate beneficial impact of the scheme (Appendix 7).

In general, Structure Plan strategy Policy 2 and IMP1 is supported. The Findhorn/Pilmuir FAS employs a strategy of “making space for water” and “mitigation by design”. The former seeks to maximise the width of the river corridor as well as improving both the connectivity between the river and its flood plain and the conveyance of flood flows within the river channel, thus enabling the river to return to its natural regime (Appendix 1). The latter reflects account of the careful design and siting of the scheme elements undertaken in the development of the scheme to minimise or avoid adverse environmental impacts where possible.

Examples include setting back defences of lesser height than might otherwise be required for defences constructed along the banks of the channel, a bridge design chosen to complement the bridge at Broom of Moy and enhance the landscape character of the area as opposed to an exact match of the existing structure. In addition, haul tracks are formed within the site during construction and then retained for use in the operation/maintenance of the scheme and they minimise the amount of construction traffic on the public roads. The re-use of excavated material within the site also reduces the need to import fill material or transport waste off the site. At Pilmuir, the channel design accommodates rather than prevents seepage and groundwater.

The proposal complies with Policy IMP2 where an ES is provided, which draws upon various surveys and assessments to support and inform the development of the Findhorn/Pilmuir FAS. According to an independent Review, the identification and assessment of likely significant effects in the ES is considered as "good, only minor omissions and inadequacies" (Appendix 6). Following earlier investigation, no significant traffic impacts were identified, hence no transport assessment has been sought or required (Appendix 5). The scheme itself does not require a retail assessment, although at the FPO enquiry, evidence will be led regarding the impact of the Findhorn/Pilmuir FAS upon a business, Mackenzie & Cruickshank (Appendix 4).

A) IMPACT ON DESIGNATIONS WITHIN AND AROUND FORRES

Structure Plan Policy	**1 and 2**
Moray Local Plan 2008	**Forres FA2, FA3 I1, ENV5, ENV9, ENV10, Broom of May Rural Community, ED1, ED3, T7, CF1, CF2, CF3, E3, E4, E9, E10, EP3, ER3, ER5, ER6, IMP1, IMP2, IMP3**

Departures from the Moray Development Plan

i) Development on agricultural land

Policy ER6 presumes against "irreversible" development on prime quality agricultural land. In this case the North Forres Embankment and West Forres Embankment (south of Pilmuir Pumping Station) cross four and three fields and are located on prime quality, mainly Class 2 and 3.1 quality agricultural land respectively. The ES acknowledges this departure, albeit against Policy L/ED12 of MLP2000, which is now superseded by Policy ER6 in MLP2008. Although visually part of an existing large agricultural field to the west of Forres, the northern part of the West Forres Embankment, the West Forres Drainage Channel and the northern part of the Pilmuir Drainage Channel including the Pumping Station west of Pilmuir Road West are now located within the Forres settlement boundary on an environmental designation (Forres ENV10).

According to the ES, a moderate adverse construction impact occurs with prime quality land accounting for approx. 31 of 41 ha of all agricultural land (all Classes) located within the footprint of the scheme. This land is required either to construct embankments or for storage and access etc (Appendix 7)

A departure from policy can be supported. The extent of land being taken out of production is relatively small, approx. 8% of 370 ha of prime quality land or 6% of all agricultural land (509 ha) located within the 1 in 200-year event area. Following construction, land not required for operation of the scheme can revert to agricultural use. Where possible, the scheme has aimed to minimise disruption of this land-use by positioning embankments and other works e.g. haul tracks close or parallel to field boundaries and ramps are included to allow access over the embankments.

However, fields are severed but the viability of individual farms is not compromised and without prejudice, any damage may be eligible for compensation (Appendix 4).

In addition, taking into account their nature and function, the embankments have been set back from the River Findhorn and positioned to maximise the protection afforded to Forres. The alignments of embankments across agricultural land have already been agreed by earlier decisions (e.g. for North Forres Embankment), thus the principle of embankments on prime quality land has already been accepted. Although not designed to do so, the scheme will afford protection to some agricultural land and with approx. 17% of all agricultural land and 50% of prime quality land within the site protected by embankments, a moderate beneficial impact resulting from operation of the scheme. To mitigate and ensure the effects of agricultural land use practices in these areas so as not to impact on the effective operation of the Findhorn/Pilmuir FAS, S.75 Agreements with relevant parties are proposed, to be concluded independently of this application.

ii) Development outwith Forres settlement boundary and within Forres "Countryside Around Towns (CAT)

The West Forres Embankment (south of Pilmuir Pumping Station), West Forres Drainage Channel Outlet (north of A96), West Forres Embankment with grout curtain, West Forres Revetment, North Forres Embankment, gravel extraction at Bend 2 and haul track and the new bridge south of Broom of Moy are all located outwith the settlement boundary of Forres and within the Forres CAT designation. As such the scheme departs from policy E9, which states that development immediately outwith town and rural community settlement boundaries will not be acceptable unless for a designated LONG site, and from policy E10, which presumes against development in the CAT unless of certain specified types of development. In this case, several Findhorn/Pilmuir FAS works, in whole or in part, are located immediately outwith the settlement boundary and on land which is not subject to any LONG designation. Furthermore, the Findhorn/Pilmuir FAS is not one of the specified development types permitted within the CAT.

A departure can be supported, taking account of the nature and function of the scheme whether to restore the river to its natural regime, by excavating a build up of gravel on Bend 2, or in seeking to maximise protection to Forres, by locating embankments to the west and north boundaries of Forres to direct flows away from it. These features will also constrain rather than promote development within the floodplain, thus maintaining the distinction between the built up area and the surrounding countryside. Furthermore, although locally their impact may be greater, the proposals are not considered to significantly detract from the appearance and character of the CAT, even although substantial changes in landscape character and visual amenity will result. With the Forres FA2 designation shown outside the settlement boundary and in the CAT (Forres Proposals Map refers) and the location and alignment of embankments around Forres having already been agreed, the principle of the Findhorn/Pilmuir FAS on land outwith Forres and in the CAT has already been accepted.

The/

The West Forres Embankment/West Forres Drainage Channel is located over an open and flat landscape that forms part of the CAT (and ENVI0) designation to west of Forres. Major and moderate adverse landscape and visual impacts respectively are predicted during construction, associated with highly visible and significant earth works to form the embankment, channel and raise/divert the A96 road. With operation of the scheme, retention of the linear embankment feature will have a minor adverse landscape impact (Appendix 7). Initially, it will appear harsh and out of context but over time with grass seeding, the establishment of tree planting (over 10 – 20 years) and regular maintenance a moderate beneficial residual landscape impact is identified.

The visual impact of the embankment will vary according to viewpoint, whether minor adverse towards its southern end where it is less intrusive (and screened from the rifle range by planting) or moderate adverse at its northern end, where it is wider, higher and readily more visible from the A96 road (which itself will be elevated). However, once planting is established, a minor beneficial impact will result and it will help to 'soften' the current abrupt transition between the urban and rural area along the western boundary of Forres and part screen Pilmuir from the A96 road. As such it will help to achieve an objective of the MLP2008, to enhance the western approach to Forres.

Whilst not objecting, SNH have identified the need for a more flexible planting scheme to further reduce the impact of these works including choice of species and planting on lower slopes and crest of the embankment (Appendix 5). However, this would be subject to planting not affecting the integrity of the embankment or the pumping mains underneath it. It should also be noted that the planting arrangements are solely to mitigate the impact of the Findhorn/Pilmuir FAS works. Any planting between the embankment and Pilmuir within the remainder of the Forres ENV10 designation would have to be achieved separately from this development in order to also further objectives to improve the western approach to Forres.

Within the CAT area, the pumping station will appear detached from any surrounding building but partially masked by the embankment to the west. The design and external finishes are satisfactory albeit functional in appearance with the mono-pitched roof part of the building designed to allow access to remove the pumps as required.

The CAT designation extends along the right hand bank of the River Findhorn between the A96 road and Findhorn Viaduct. The West Forres Embankment with grout curtain, West Forres Outfall and Forres Revetment are located within the CAT between the river channel and the Forres I1 Greshop West/Mackenzie & Cruickshank Garden Centre boundary, except where the embankment encroaches into the latter to tie into other structures (Appendix 1). The grout curtain has no impact on the CAT, being located under and within the proposed embankment. The outfall and revetment works have limited local but not significant adverse impact on the CAT given the limited area and height of the works which are incorporated within or located adjacent to other existing or proposed features which afford screening or act as a backdrop to these work elements.

Given/

Given the extent of the proposed works and the limited space available, all the existing woodland along this section of riverbank will be felled and/or coppiced. During construction, views and the setting of the Garden Centre, the railway bridge and river will be opened up all along the right hand embankment, hence the moderate adverse visual impact predicted in the ES during construction. With operation of the scheme, a minor adverse visual impact will occur along the right side of the embankment and crib wall (looking downstream) softened only by wall planting on the crib wall and grass seeding over the embankment, but with no tree planting to replace the overhanging tree canopy. Along the left hand side of the embankment, grass seeding and planting with semi-mature trees aim to give an almost 'instant' effect to mitigate against the views of the river and screen the Garden Centre albeit with gaps in the planting to allow views and access to the river. The ES anticipates that any initial adverse visual impacts associated with operating the scheme will result in lasting minor/moderate beneficial visual impacts after approximately 10 years.

Minor and moderate adverse landscape and visual impacts are predicted in relation to construction of the North Forres Embankment mainly across open agricultural land and the raising of Waterford Road and from vehicle movements transporting material along the haul track on the crest of the embankment to/from Bend 2. These works will also necessitate temporary closure of existing footpaths and the Sustrans cycle route, which crosses the alignment of the embankment/track. Following construction these routes will be re-instated and/or re-aligned. These latter works do not adversely affect the appearance of the CAT.

With operation of the Findhorn/Pilmuir FAS, the North Forres Embankment will remain as a long linear feature extending across a relatively open agricultural landscape, except where masked by trees around Greshop House or alongside the railway embankment. In cutting across fields (rather than following existing boundaries) the embankment will appear out of context, hence the resultant minor adverse landscape and visual impact, even after it is grass-seeded over. However, it will not be significantly intrusive in height terms, up to 2 m and reducing over its length to approx. 1m where it crosses the raised section of Waterford Road. Whilst the impact of the works will be greater in its immediate vicinity, the ES considers that over longer distances the embankment will appear insignificant.

The crest of the embankment between Waterford Road and Greshop House incorporates a haul track that leads to/from Bend 2. Along a new section of track laid between Greshop House and Bend 2 and except for the ramps at each end of this new section of track, the impact of this part of the track will be limited being located at ground level and part masked by woodland.

To extract gravel at Bend 2, vegetation growing over the area of excavation and an area of native deciduous woodland will be removed to leave a coniferous plantation, thus changing the landscape character and setting of the CAT at this locality. In addition a new footbridge across the gravel area will be constructed and footpaths and the Sustrans cycle route to/from the bridge will be temporarily closed/diverted. As a result, moderate adverse landscape and visual impacts during construction will occur, even with mitigation proposals to confine the works to designated routes and areas, or to seek to minimise disruption to public access by phasing the works and upgrading/providing temporary alternative routes for cycle and footpath infrastructure where possible.

With operation of the scheme, the new bridge and ramped sections of paths connecting to the existing path network will be new features in the landscape as will the extensive area of open gravel adjacent to the river channel. The ramps will be grass-seeded to soften their appearance. Whilst not unacceptable in design terms, the new bridge will appear inconsistent with the design of the existing bailey bridge although it will be painted to match the colour of the existing Bailey bridge, thus lessening its impact on the locality. However, due to practical constraints where the excavation works are intended to restore the river to a more natural regime, there will be no opportunity to replant within the excavated area. Further extraction may be required on an infrequent basis in the future dependent on any re-build up of gravel in the area.

Within parts of the CAT, the appearance of the area will substantially change as a result of the works, hence the moderate adverse landscape and visual impacts arising from the operation of the scheme (Appendix 7). The resultant appearance of a river meandering between areas of gravel alongside its current channel of the river is a natural feature and not uncommon or unattractive feature of a watercourse, regardless of whether or not it is located in a CAT designation.

iii) Impact on industrial land, including Forres I1

The West Forres Embankment with grout curtain and the raising of the A96 road are located along or encroach into the western and/or southern boundary of a Garden Centre and Motor Factors premises located within a designated industrial site, Forres R1 (MPL 2008 refers). This is one of five sites designated for industrial purposes in Forres and the only industrial designation directly impacted upon by the Findhorn/Pilmuir FAS. Impacts of the Findhorn/Pilmuir FAS on these individual operations are considered in Appendix 4 but with approx. 20% of Forres I1 disrupted during construction of the scheme, a minor adverse construction impact is predicted (Appendix 7). Whilst the bulk of the embankment and raised road works are located outwith the boundary of both premises, it will be necessary to access and undertake works from within that premises. In mitigation, the ES includes keeping the construction footprint to practical minimum, to minimise disruption and the extent of access required, etc. Having replaced an embankment slope with a crib wall along the rear boundary of the Garden Centre, this too is a mitigation measure designed to minimise the required amount of land take.

Policy ED1 seeks to maintain a supply of industrial land in Forres and elsewhere. The Findhorn/Pilmuir FAS will result in a loss of land designated for industrial purposes, hence the departure from policy. However, this departure can be supported given that the extent of such loss is relatively small i.e. 150 sq. m at the Motor Factors and 814 sq. m at the Garden Centre, although some of the latter would be reduced if alternative land is made available (Appendix 4). In addition, the impact of the works is confined to areas around the perimeter of the designation rather than within the designation itself, leaving other land available for development. The losses involved do not adversely prejudice the requirement to maintain an industrial land supply. Operation of the scheme has a moderate beneficial impact with all industrial designated sites protected by the scheme, except 0.2% of land of Forres I1.

Policy ED3 seeks to ensure that designated industrial sites, including Forres I1 are reserved for employment related uses. Development on this designation for the Findhorn/ Pilmuir FAS would not conform to the range of uses considered suitable for Forres R1. However, policy ED3 does allow for other uses to be considered subject to their suitability. Given the extent and location of encroach of the scheme as noted above and the function and purposed of the works, the proposal can be considered suitable rather than depart from this policy.

iv) Development on Pilmuir Playing Fields, CF2

Part of the Pilmuir Drainage Channel i.e. the culvert under football pitch (and Pilmuir Road West) is located within the Forres ENV5 Sports Area (Pilmuir) designation (formerly CF3 in MLP 2000). Whilst this designation is governed by policy E4 (see below), the latter is clear that for identified sports area, Policy CF2 also applies (Appendix 2)

Policy CF2 aims to protect existing sporting and recreational facilities from inappropriate development. The Findhorn/Pilmuir FAS would depart from this policy, in this case because these works are not required to enhance the principal sporting use, hence the minor adverse construction impact identified where the culvert works encroach onto the football pitch area. A departure can be supported given the limited extent of the works, whether in terms of area involved or the temporary nature and duration of the works involved. In addition, the pitch can be relocated approx. 7m to the north east to accommodate the culvert works and when completed, the ground can be re-instated and the pitch can continue to be available for use. Furthermore, with operation of the scheme, this site will no longer flood (up to 1 in 200 year event) and sportscotland has not objected to the proposals subject to implementation of the proposed mitigation measures (Appendix 5 and 7). The latter include relocating the pitch before commencing the culvert, programming the works during the close season, installing net fencing to south-west of ground (replacing trees being removed) to help prevent balls being kicked out of the ground and providing a pole/catching device to recover the ball from the channel.

Impact on other designations

i) Impact on Environmental Designations

The Pilmuir Drainage Channel i.e. the open drainage channels within the nursery area and the culvert under the corner of Pilmuir Sports Area football pitch and the West Forres Drainage Channel and West Forres Embankment (northern part), West Forres Drainage Channel and Pilmuir Pumping Station are all located on environmental designations, Forres ENV9 and ENV5 (formerly ENV8 and CF3 in MLP 2000) and ENV10. Development within these designations is governed by policy E4 which seeks to protect green space by refusing development which causes the loss of, or impacts upon this designation unless it is for a public use and is sited and designed to minimise adverse impacts.

In this case the proposals do not conflict but meet with the requirements of this policy even although the culvert works within Forres ENV5 depart from policy CF2 (see above). Once constructed the embankments and channels will be retained as permanent features in the landscape, hence they cause loss of, or impact on each designation to varying degrees. However, as part of the Findhorn/Pilmuir FAS, the proposals serve a public use i.e. to alleviate flooding and they have been sited and designed to minimise their impact where possible.

Within Pilmuir nursery (ENV9), a minor adverse construction impact is predicted associated with the construction to two open channels, with 20 – 60% of land affected. With the scheme in place the adjoining ground can be re-instated for use. Despite the loss of land area used by the channels there will be a minor beneficial impact as the site is afforded protecting from flooding. The impact of each channel is mitigated by the channel reducing in width (upstream) and whilst formed below ground level, the cobble side slopes will grass over in time. In addition, the ‘southern’ channel is kept close to the site boundary, leaving the remaining area available for use by the nursery after construction. The ‘main’ channel which heads east towards to an adjoining area previously identified for housing, will sever/divide the nursery area. Pedestrian bridges allowing access over the channel are proposed.

The location of the main channel will also mean that less of the adjoining area will be available for development.

Within the Pilmuir Sports Area (ENV5) and as noted for policy CF2 above, a small area in southwestern corner of the area is affected by the construction of an underground culvert. Once the culvert is installed and the ground re-instated, the football pitch will be available for use, once relocated 7 m to the north east.

The West Forres Drainage Channel and Embankment (northern part), and works to raise the A96 road are located within the Forres ENV10. These works occupy the western half of the area. Compared to the existing open, flat agricultural landscape, the proposal will result in a noticeable change in land use and appearance with a long open channel approx. 22 m wide located alongside a embankment approx. 46 – 49 m wide with a 33 m crest width. These works are adjacent to and visible from the A96 road. Landscape planting is proposed to mitigate the impact of the scheme works but this will take time to become established and mature. Despite SNH encouraging more opportunities for planting, the arrangements here will contribute to the enhancement anticipated by the Forres ENV10 designation and an objective to improve the western approach to the town. However, the arrangements here do not include planting over the remaining part of the Forres ENV10 designation between the embankment and the Pilmuir area of Forres. Environmental improvement on this area would need to be addressed separately.

ii) Impact on Sustrans route

The Sustrans cycle route, NNR1 passes through the Findhorn/Pilmuir FAS between Broom of Moy and Forres across a bailey bridge and on a path through woodland to Waterford Road and beyond. Policy T7 indicates that proposals that adversely impact on the route and cannot be adequately mitigated will not be acceptable. In this case the proposal is acceptable and complies with policy because the adverse construction impact on the route can be mitigated.

Construction work will necessitate closure of the bridge crossing to construct a new section of bridge over Bend 2, where gravel will be excavated and new sections of paths will be formed to re-connect to the existing route. The route will be closed for approx. 4 months and with the route severed, it will not be possible to maintain access through local diversions. To mitigate this impact, in an acceptable manner, a diversion route through Forres and over the A96 road bridge was discussed/agreed with Sustrans in March 2008, according to the ES. Additional mitigation measures as identified include a temporary traffic order to close the route with diversion routes signed and advertised, provision of gates for safety where the route crosses haul routes, and reinstatement to Sustrans requirements including signage, ramps graded to DDA requirements and an anti-skid surface to the timber decked bridge (Appendix 7).

With operation of the scheme a minor adverse impact is identified. Although the route is re-instated on a slightly realigned route, the visual amenity and appearance of the route will be substantially altered following removal of vegetation, some of which will not be replanted (over Bend 2) although elsewhere over time, replanting will improve the appearance. Every 5-10 years or so, the route will be impacted upon by vehicles undertaking maintenance to remove any build up of gravel and vegetation at Bend 2.

iii) Impact on the surrounding countryside beyond Forres CAT

Works along the left hand bank of the River Findhorn are located outwith the Forres CAT and in the countryside, including vegetation removal, gravel extraction, haul trucks to/from Bends 1 and 3 and Bank Run. No significant adverse impacts are identified although substantial lasting changes in landscape character and visual appearance occur.

Construction works between the A96 road bridge and Findhorn Viaduct (both up- and down-stream Bend 1) will have a moderate adverse impact on landscape character and visual appearance. These works include removal of trees/shrub and riparian woodland to open up a side channel, the borrow pit and site compound/processing centre (although the land will be re-instated after construction works are complete), the haul tracks on either side of the railway line and gravel extraction on Bend 1.

Removal of vegetation from river corridor and gravel excavation will open up views of the river channel and railway viaduct, exposing an additional pier and the west abutment; a view last experienced some 150 years ago before the adjoining bank became vegetated. The haul tracks run parallel to the railway embankment, which acts as a screen or provides backdrop and on the south side of the railway the new embankment will be grass seeded and 'grow' out of the railway embankment.

With operation of the scheme a moderate adverse landscape impact results, at least initially with the tracks and disturbed ground appearing prominent although with seeding and planting this will mitigate some of that impact. Removal of vegetation and gravel extraction, with any subsequent re-growth and gravel build up removed as part of a programme to maintain the scheme, will have a lasting impact on setting and landscape character of the river with unbroken open views of river and bridge. However a river meandering in a channel between exposed gravel beds is not an unusual or unattractive feature in the landscape. Initially, replanting, where proposed, will have little impact but the ES anticipates a resultant minor to moderate beneficial visual impact associated with reinstatement of views to/from the bridges, in particular Findhorn Viaduct. Once established and mature, planting along the right hand bank along the West Forres Embankment will enhance the amenity and appearance of the area.

North of Findhorn Viaduct (left bank) the new haul track leading to/from Bend 3 and Back Run. The track is not significantly intrusive upon the landscape being located alongside and not higher than the existing embankment along the riverbank. Lorry movements along the track during construction and operation of the scheme are likely to be more intrusive in visual terms than the track itself.

The track is located around the south and east sides of Broom of Moy, a designated Rural Community in the MLP2008, and over part of an area of "amenity land", on which development is governed by Policy E4. Formation of the track will result in the loss of part of this land and it will be retained for maintenance of the scheme. However, the proposal is acceptable as it is for a public use i.e. the Findhorn/Pilmuir FAS, a limited amount of land is lost and the track is sited along the edge of the amenity land rather then sever it. In the ES, the temporary disruption to the local community relating to the construction and use of the track by approx. 8000 lorry movements around Broom of Moy during an estimated construction period of approx. 12 months is considered to be a minor adverse construction impact on the landscape character of the area (Appendix 7).

The haul route extends to Bend 3 and Back Run where minor adverse landscape and visual impacts are predicted during the construction phase of the scheme associated with the removal of vegetation and gravel extraction, and also lorry movements to/from these areas. Once cleared of vegetation and the gravel bed at the entrance is lowered, operation of the scheme is considered to have a negligible or minor adverse landscape and visual impact on this area. Removal of any re-growth of vegetation or build up of gravel will be undertaken as part of the proposed maintenance programme and is unlikely to change the landscape character or view of these areas. Within the Back Run, the channel will be defined by clearing vegetation along its route but the vegetation/trees adjoining the channel will be retained.

B) IMPACT ON FLOODING AND WATERCOURSES

Structure Plan Policy 2(j)
Moray Local Plan 2008 EP6, EP7, IMP1, IMP2

These policies seek to divert development away from areas at risk of flooding, ensure that proposals identify and mitigate their impact on the management and ecology of watercourses. The latter are considered separately below. Following consideration and consultation, including the absence of any outstanding statutory consultee objection and subject to conditions as recommended, together with the reasons indicated below, the proposal is not considered to conflict with these policies.

Impact on Flooding
Structure Plan Policy 2j promotes schemes to tackle flooding that threaten existing development and to alleviate flooding in a sustainable and sensitive manner. Based on earlier Council decisions the Findhorn/Pilmuir FAS is considered to represent the must cost-effective, environmentally acceptable and sustainable solution to manage flooding issues from the River Findhorn and Pilmuir catchments. It will tackles the threat to flooding within the Findhorn and Pilmuir catchments by providing flood alleviation works to an agreed standard, 1 in 200 year event. This includes flood defence embankments to protect Forres, a drainage channel to divert overland flows and gravel extraction works to increase conveyance within the river channel (Appendix 1). The Forres settlement statement acknowledges that flood alleviation schemes for Forres are being progressed for Forres i.e. FA1 for Burn of Mosset, which is being implemented separately from this current scheme which combines FA2 for River Findhorn and FA3 for Pilmuir (Appendix 2).

The requirements of policy EP7, including submission of a Flood Risk Assessment (FRA) conform to national advice i.e. SPP7 now superseded by a single SPP (Feb 2010). The latter confirms flooding as a material planning consideration and that development which has a significant probability of being affected in flooding or would increase the probability of flooding elsewhere should not be permitted. Previously, Scottish Ministers have considered that SPP7 is not directly applicable to flood prevention schemes because they are constructed in areas affected by flooding and whose central purpose is to reduce a significant probability of water flowing over a floodplain to safeguard life and to mitigate against the effect of flooding on homes and businesses (Water of Leith FPO decision letter, 15 March 2007 refers).

Reflecting planning policy, the basis for consultation on flooding for example with SEPA is about whether there is a material increase in risk to property or persons, not land. PAN 69 indicates a greater threat to life and properly from flooding in densely populated areas than to agricultural land. At the FPO for the Elgin FAS, the Council's position was that the community benefits of alleviating flooding in Elgin outweighed any risk of flooding of agricultural land downstream of Elgin. A similar position could be advanced here. In this case, 83% of the 509 ha of agricultural land within the 1 in 200 year event area still liable to flood, hence some protection of agricultural land will result.

In relation to EP7 (and the SPP) the Findhorn Pilmuir FAS is considered to comply with policy. The FRA demonstrates that no material increase in flooding occurs elsewhere. The scheme has no effect on flood risk on areas upstream of Forres, where the number of properties at risk remains unchanged. In Forres, the Pilmuir drainage channel will afford protection to an increasing number of properties and the West and North Forres Embankments will also alleviate flooding from the River Findhorn. Downstream, an aim of the scheme, to make no property worse off, has been achieved. The FRA demonstrates that with the scheme, gravel extraction/lowering to increase the channel conveyance and capacity will help to reduce any increases in water level to approx. 0.15m. The number of properties at risk are unchanged during a 1 in 200 year event, except one property (unoccupied) at Mains of Moy which is already at greater risk of flooding from the Muckle Burn (Appendix 6). In terms of examining the effect of the Findhorn/Pilmuir FAS on flood flows in the Muckle Burn and despite localised increases in water levels, the former will not exacerbate or have any effect on the extent of flooding caused by the latter (Appendix 4).

An earlier objection, by SEPA on the grounds that flood risk may be increased elsewhere has been withdrawn. Following further information and consideration, SEPA are satisfied that property is not at increased risk of flooding. The amended plans cause no further impact on the channel or conveyance of flows to alter that stated position (Appendix 5).

Impact on Waterbodies

Following an independent Review the ES is assessed as "good" in identifying and assessing likely significant environmental effects and mitigation measures (Appendix 6). In terms of policy ER6 (and IMP2) the ES is therefore a "satisfactory report" in demonstrating that impacts are addressed and adequately mitigated for hydrology, sediment transport and erosion, water quantity and flow rates etc. Ecological or nature conservation requirements of policy ER6 are considered separately (see below). An Environment Action Plan (EAP) is proposed to incorporate all method statements and mitigation measures to be adopted and implemented (Appendix 7).

Subject to conditions as recommended and for reasons indicated below, policy EP6 is met. Although SEPA may have removed their objection to the planning application, matters regarding hydrogeology and water engineering issues will also require to be addressed in separate consent procedures e.g. CARs.

a) impact on hydrology/flow rates

Overall, a negligible construction impact on flow rates is identified, mainly because construction activity is set well back from the River Findhorn. The only in-channel work is for the West Forres Revetment, which will affect 150 m of the existing channel. This will have the potential to cause minor localised alterations in flow direction and velocity. Removal of vegetation from the Back Run, to increase the ability of this channel to convey water and gravel extraction at Bends 1, 2 and 3, to increase channel capacity will have no impact on flow rates as these works are undertaken outwith the existing channel.

With operation of the scheme, a minor to moderate beneficial impact is anticipated, as the works will generally restore the river corridor to a more natural state by re-connecting the low flow channel to the gravel areas. A 0.2% increase in flow to the River Findhorn from the Pilmuir drainage channel is considered negligible and the revetment works will not obstruct or change the direction of flow or increase water velocity within the existing river channel. Once lowered, the area of gravel will be inundated more frequently with the potential to reduce surface water flow levels and help reduce scour within and along the river.

During construction, a minor adverse construction impact on flows is predicted for the Muckle Burn, a result of increased frequency of flows and velocity from operation of the Back Run with the potential for increased localised scour and erosion of the banks and transfer of sediments downstream. With operation of the scheme, similar impacts are likely to be experienced but as the Burn adapts and returns to more natural state, a negligible impact is predicted.

b) impact on water quality

For the River Findhorn (and Muckle Burn) where water quality is currently rated as "good to excellent", the impact on surface water quality is deemed as a minor adverse impact. As noted, most construction activities are outwith the channel and set well back except for the West Forres Outfall, Embankment and Revetment, where the potential to input pollutants into the water course is at its greatest. The Review of the ES welcomes the precautionary approach adopted to address pollution and the potential degradation in water quality, with a range of mitigation measures identified. Some are specific to the works being undertaken close to the river; for example work undertaken only during low flows and low rainfall and in the event of a high flow, all materials and equipment would be withdrawn until river levels have dropped. Other measures are more 'generic' including the use of best practice and other recognised measures, sediment and pollution management plans, method statements to define practices and methods of working and adherence to SEPA pollution prevention guidance, etc (Appendix 7).

With operation of the scheme, the impact on water quality is assessed as negligible. The likelihood of a spill during maintenance operations entering the watercourse and degrading water quality is low. However, a pollution management plan will be adhered to during these operations at various sites, for example at Back Run whilst removing debris/vegetation during extended periods of low flow or from the lowered gravel bars. These maintenance arrangements will also form part of an adaptive maintenance strategy to ensure no re-grow or re-accretion of the gravel areas by more than 50%, the maximum allowable level before the flood defence standard is lowered.

c) impact on sediment transport and erosion

Potential construction and operation impacts are assessed for the River Findhorn, Back Run, Muckle Burn and Findhorn Bay. By removing gravel to create a wider river channel, water and sediment can be efficiently conveyed downstream, reducing the flood risk to Forres and other areas. Allowing waster to flow over the lowered gravel bars will also help to reduce water levels during high flow events. With frequent inundation, they will be kept dynamic, and reduce vegetation re-colonisation and requirements for maintenance.

During construction a minor adverse impact on sediment supply is anticipated for the River Findhorn. With construction, approx. 155,000 cubic metres (310,000 tonnes) of sediment will be excavated and removed from Bends 1 (110,000 tonnes), 2 (126,000 tonnes) and 3 (70,000 tonnes). The gravel bars will be lowered to within 2m of the low flow water level but none of this work will be undertaken in the active channel. The only in-channel works are at the West Forres Revetment where through disturbance there is potential to release material into the water but as the river already carries high levels of sediment in suspension, the addition of some sediment here is not anticipated to impact on aquatic habitats. A number of mitigation measures are proposed including sediment and pollution management plans, minimising the extent and duration of in-channel works, minimising exposure of bare soil and part completed works, regular inspection and monitoring, and any spillage to be removed and disposed immediately (Appendix 7).

With operation of the scheme, the release of fine sediments is considered small and will have a negligible impact compared with the volume of suspended sediment (32,000 tonnes) already supplied to the River Findhorn. Within the Pilmuir drainage channel, use of a geotextile material to line the channel will reduce the possibility of ground water seepage dislodging sediment. During operation of the scheme an adaptive maintenance regime is proposed using surveys to assess and determine when and where further removal of vegetation and sediment/gravel build up is required. The design of the scheme aims to re-create a self-sustaining passive river system with limited or no maintenance and by re-establishing exposed gravel surfaces lost under vegetation this will help re-create favourable conditions for invertebrates, hence the moderate beneficial residual impact identified in the ES (Appendix 7).

For the Back Run and Muckle Burn, construction works will have a minor adverse impact. Leaving the cut vegetation in situ along the Back Run may reduce the movement of sediment but higher volumes of water and flow velocities will lead to the frequent transfer of sediment downstream resulting in localised scour and impact on aquatic habitats. With operation of the scheme, a negligible to minor beneficial impact on bedload dynamics and sediment supply is predicted as the Burn adjusts and adapted to changes in the watercourse. Mitigation measures are proposed, similar to those proposed for the River Findhorn including an adaptive management system with regular inspection and monitoring.

Both construction and operational phases of the scheme will have a negligible to minor adverse impact in terms of sediment supply to Findhorn Bay. This is based on an increase in fine sediments conveyed downstream even with the scheme allowing the river to actively transport sediment across a larger area of the river corridor. Proposed mitigation to minimise/reduce the supply of sediment include beginning works downstream and progressively working upstream to minimise the amount of time unprotected surfaces are exposed to water flow. The impact of the Findhorn/Pilmuir FAS in particular the downstream transfer of sediment into Findhorn Bay, a designated SSSI and part of the Moray & Nairn Coast SPA and Ramsar site is considered separately below.

d) impact on soils and geology, hydrogeology and groundwater

In terms of soils and geology, minor adverse construction impacts are predicted. With above ground embankments, the strata will only be slightly altered. However, approx. 220,000 cubic m of material will be excavated/removed, a noticeable alteration in the geology of the river. During operation of the scheme, a negligible impact is identified, where local consolidation under the embankments may arise and reduce permeability, the geotextile material on the side slopes of the drainage channel will reduce scour. With the lowering of the gravel area there will be no additional effect on soils although if the gravel bars re-accrete, additional work to remove this material will be required.

Minor adverse construction and operational impacts on hydrogeology are anticipated. The former include the need to locally de-water where ground water is intercepted during works located below ground level e.g. at Pilmuir Drainage Channel and the pumping station or from installing the grout curtain as a barrier to groundwater flow.

In terms of ground water quality, moderate and minor adverse construction and operational impacts respectfully are anticipated, principally relating to the potential for contamination from surface spillages. However, with the scheme, the quality of flood water will be better as flood waters will not have passed over urban or commercial sites before entering the groundwater. A range of mitigation measures to reduce rather than eliminate the risk of pollution are proposed. These include adherence to SEPA guidance, locating compounds away from watercourses as far as practically possible or on impervious ground, measures to protect sites from spills, the development of a constructional environmental management system to identify best practice and develop construction method statements, refuelling within designated areas, etc (Appendix 7)

C) IMPACT ON BUILT ENVIRONMENT

Structure Plan	**Policy 2f**
Moray Local Plan	**BE1, BE2, IMP1**

Current policy seeks to protect Scheduled Ancient Monuments (SAM), archaeological sites and listed buildings from any development that has an adverse affect on their character, integrity or setting. Subject to conditions as recommended and for reasons below, the proposals accord with these policies. Relevant consultees have not objected to the proposals (Appendix 5).

Impact on Scheduled Ancient Monuments (SAM)

Although subject to separate consent procedures, Historic Scotland was formally consulted because the Findhorn/Pilmuir FAS is located within the Greshop Farm Sam site, and/or works affect its setting. Historic Scotland has not objected to the proposals because the public benefit of the scheme, to alleviate flooding, is considered to provide exceptional circumstances to justify the resultant encroachment and impact on the SAM. In addition, the mitigation arrangements are also acceptable. Historic Scotland also notes that constructing a temporary road around the SAM is not possible within the time and budgetary constraints of the project (Appendix 5).

During construction there will be a direct, major adverse impact, with 15% of the SAM area affected by construction works to raise the A96 road within its current road footprint, where most archaeological features are likely to have been already lost or damaged (10%) or by the temporary diversion of the A96 road to the south through the SAM whilst the existing road is raised and an new roundabout access is formed (5%). In addition, the West Forres Embankment and West Forres Drainage Channel affect the setting of the SAM as these works adjoin the SAM boundary. Mitigation measures proposed to reduce these impacts (to a moderate adverse construction impact) include proposed field evaluations along the A96 verge and route of the temporary road, fencing off the SAM area, undertaking all works outwith the SAM area, and arrangements to cease work if archaeology finds are discovered, etc. (Appendix 7)

With operation of the scheme a minor adverse impact is predicted. No works will be located on the SAM and the temporary road through the site will be removed and the land re-instated. However, the raised section of the A96 road, the West Forres Embankment and West Forres Drainage Channel will affect the setting of the SAM, by their proximity and presence as new features in the landscape. However, once established, landscaping will assist to mitigate the impact of these features upon the surrounding area, including the SAM. In addition, the site would still flood but the risk of flooding would reduce from 1 in 25 years to 1 in 50 years. The period of inundation of the historic structure would be reduced with floodwater being drained off to the east by the West Forres Drainage Channel.

Impact on Archaeology

On the 29 sites of importance which are subject to inundation (within the 1 in 200 year flood event area), construction works will impact on 5 sites (one of regional and four of local importance). Construction impacts varying between moderate adverse (at Waterford Road and Greshop Farm) and negligible, depending on the importance of the site, the extent of encroachment, whether buffer zones are proposed to protect sites (i.e. defined areas within which no works or vegetation clearance will be undertaken) or whether field evaluations will be undertaken within the footprint of the works to identify and evaluate any archaeological site. The Council's Archaeological Adviser has not objected to the proposal and considers the mitigation measures to be satisfactory (Appendix 5).

With operation of the scheme the 5 sites as identified will no longer flood. This is considered to benefit cultural heritage sites, hence the predicted moderate beneficial impact in the ES (Appendix 7)

From investigations of known archaeological sites, there remains the potential for unknown archaeology to be discovered during ground breaking works, even although no finds have been encountered during ground investigations undertaken so far. Where sites are considered more likely to contain unknown archaeology, a moderate adverse impact is identified. With implementation of proposed mitigation measures, including a photographic survey of the landscape of the river corridor and archaeologists undertaking watching briefs during ground braking works, a negligible residual impact upon unknown archaeology is predicted. A review of the ES welcomes this precautionary approach (Appendix 6).

Impact on Listed Buildings

The ES identifies 8 listed buildings in the study area, of which 3 flood during a 1 in 200 year event. The Findhorn/Pilmuir FAS does not include works to a listed building, hence the consideration relates solely to the impact of the works on the setting of those buildings.

At Bridge of Findhorn (Category B) (road bridge) the changes in views downstream of the road bridge with the removal of trees and under-storey vegetation and re-profiling the gravel bar (left hand bank) will have a minor adverse construction and operation impact on the setting of this listed structure.

A moderate adverse construction impact is predicted for Greshop House (Category B) related to the duration and proximity of the construction works for the North Forres embankment and at the temporary processing centre nearby. Whilst the latter will be removed on completion of construction of the scheme, the embankment extending around the western and northern boundaries of this property will be retained, although the visual impact of the embankment on the setting of the house will be screened by boundary trees/hedging and outbuildings.

A moderate adverse construction impact is identified for Findhorn viaduct resulting from the removal of vegetation and lowering of gravel bars under and around the Viaduct (left hand bank) together with the enhancement works at the West Forres Revetment and formation of the West Forres Embankment with grout curtain (right hand bank), together with the use of heavy plant and machinery associated with these works. With operation of the scheme, the restoration of the Viaduct to its original appearance is regarded as a major beneficial impact of the scheme and over time, as replacement planting along the West Forres Embankment becomes establish, this too will contribute to the amenity and appearance of the bridge.

D) IMPACT ON NATURE CONSERVATION INTERESTS

Structure Plan Policy **2a, 2b**
Moray Local Plan Policy **E1, E2, EP6, IMP1, IMP2**

These policies aim to safeguard and enhance the natural environment, including protection of designated sites of nature conservation value or to species afforded protection or priority status. Subject to conditions as recommended, including those by SNH (Appendix 5) and for reasons indicated below, the requirements of policies relating to nature conservation interests are met.

Following an independent Review the ES is assessed as “good” in identifying and assessing likely significant environmental effects and mitigation measures (Appendix 6). In terms of policy ER6 (and IMP2) the ES is therefore a “satisfactory report” in demonstrating that impacts are addressed and adequately mitigated, including attention to aquatic and terrestrial ecology and identification of measures to conserve and enhance natural heritage interests. The proposed Environment Action Plan (EAP) will incorporate all method statements and mitigation measures to be adopted and implemented (Appendix 7).

Impact/

Impact on Nature Conservation Sites

i) International and European designations, in particular Moray & Nairn Coast Special Protection Area and Ramsar site, including "Appropriate Assessment".

The ES identifies a number of designations present in or near the Findhorn/Pilmuir FAS, on which no impacts – construction or operational – are anticipated except for the Moray & Nairn Coast SPA and Ramsar site. Here, a moderate adverse construction impact on habitats is identified based on sediment dynamics, in particular increased sediment levels and the risk of spread of invasive plant species. Proposed mitigation measures include comprehensive invasive species management plan and phased removal of vegetation and gravel to reduce sediment transfer, including erosion and disturbance of habitats downstream. With operation of the scheme, a moderate adverse impact is identified, even with mitigation proposed to address the risk of spread of invasive plant species.

Given the impact of the Findhorn/Pilmuir FAS on the integrity of the Moray & Nairn Coast SPA and Ramsar site, the Council, as a competent authority, is required to undertake an "Appropriate Assessment" (AA). To assist the Council (and others), SNH has undertaken an 'appraisal' which concludes that the Findhorn/Pilmuir FAS will have no adverse long term impact on habitat and species interests and no adverse impact on the integrity of the designation (Appendix 6). Adoption of the SNH appraisal by the Council would fulfil the requirements for AA and allow the Findhorn/Pilmuir FAS to progress.

ii) National, Regional and Local Designations

Of the various designations identified only in the ES, only the National Culbin Sands Forrest and Findhorn Bay SSSI and the Findhorn Bay Local Nature Reserve are considered relevant. The features of these site are linked to the Moray & Nairn Coast SPA and Ramsar site, hence similar conclusions apply i.e. the Findhorn/Pilmuir FAS will not adversely affect these designations.

Downstream of the Findhorn Viaduct, works at Bends 2 and 3 and Back Run are located within the Culbin, Findhorn and Burghead SINS. Relative to the extent and nature of this designation, the proposed works at these individual sites, including re-profiling, removal of vegetation and lowering gravel banks are not considered to adversely affect this local designation.

Impact on Biodiversity

Local Bio-diversity Action Plans (LBAP) are species–based plans. A large portion of the works are in the immediate riparian zone and with approx. 110,000 sq m of gravel to be removed, the substantial loss of existing riparian woodland and habitat during construction is considered as a moderate adverse construction impact (Appendix 7). Other LBAP habitats are largely unaffected due to their abundance in the wider area. Proposed mitigation measures include retaining high value trees where possible, replanting and habitat creation using native species to replace felled trees and lost habitats, a management plan to control the spread of non-invasive species to sites and habitats, etc (Appendix 7).

With operation of the Findhorn/Pilmuir FAS, allowing the river to revert back towards its natural state will improve the condition of the 'rivers and burns' LBAP habitat with the potential development of wet woodland/riparian habitats along the edges of the lowered floodplains and re-opened channels. Replanting and landscaping will generally restore or enhance habitats where possible and the ES notes that the scheme offers the opportunity to enhance the environment e.g. replacing unsightly scrub at Broom of Moy with native species planting, etc

Impact on Other Species
A range of surveys relating to aquatic and terrestrial ecology interests have been undertaken. These have been used to develop and inform the scheme design and the ES.

i) Aquatic Ecology
The ES assesses potential impact of the Findhorn/Pilmuir FAS on aquatic fauna, flora and habitats of the lower River Findhorn and Muckle Burn. The ecological receptors are fish (salmonds and lamprey); freshwater pearl mussel; aquatic macroinvertebrates; exposed reverie sediments (ERS) and aquatic macrophytes (flora). Although currently not considered viable, SNH suggests measures to enhance fresh water pearl mussel populations outwith the scheme footprint should be considered (Appendix 5).

From Appendix 7, the majority of construction impacts on aquatic fauna and flora are assessed as being 'minor adverse', for both the River Findhorn and Muckle Burn. For the former, most works do not involve works within the channel, except at the West Forres Revetment, where construction impacts including noise and disturbance, loss of shade and an increase in sediments are unlikely to have an effect on species. For the Muckle Burn, works at Back Run will result in more frequent flows. This may have a local destabilising effect on the sub-strata in the burn or cause fines to be deposited, affecting habitats and species e.g. macrophytes.

The identified impacts on aquatic ecology take account of the potential impact of pollutants on water quality including spillages, construction chemicals and other contaminants entering the watercourse directly or indirectly. A range of mitigation measures are identified, including "best practice" working methods and implementation of sediment and pollution management plans, together with in-channel works being carried out during November – May (to avoid salmon breeding and egg incubation period) and no work outwith dawn and dusk (peak daily migrating period for salmon) (Appendix 7).

With operation of the scheme, the ES considers the proposal will have no impact on aquatic ecology within the River Findhorn and even as the river reaches a new equilibrium, any increased load of suspended sediment is unlikely to affect habitats. Within the Muckle Burn, operation of the scheme will have a negligible or low minor adverse impact on aquatic populations and as the Burn adjusts, localised impacts on habitats and disturbance of the river bed from increase flows may be reduced over time

Construction of the scheme including removal of vegetation and gravel extraction from Bends 1-3 and re-profiling at Bank Run will result in 25-30% loss of exposed riverine sediment (ERS) habitat. Taking into account availability of ERS elsewhere and the (medium) quality of this habitat, a minor adverse impact is predicted. Proposed measures to mitigate this impact include starting the lowering/excavation works from the downstream end of the scheme and progressively working up-stream, opening Back Run to the river edge during a period low flow, keeping any topsoil contaminated by invasive plant species separate from other material, and lifting and relaying sections of material from gravel bars within 1-2 hours to retain the character and population of the ERS habitat. Requirements to maintain the lowered gravel bars during operation of the scheme (to sustain the 1 in 200 year standard of defence) may periodically have a minor adverse impact on invertebrates within the ERS.

ii) Terrestrial Ecology

Following surveys, impacts are assessed for fauna (bats, otters, badgers, red squirrel, water vole, birds, amphibians, reptiles) and flora and habitats (trees, invasive plant species). A range of impacts are identified plus mitigation measures, where appropriate e.g. provision for tree planting to replace some of the removed trees, implementation of an invasive species management plan, consultation with SNH and pre-construction survey to confirm presence of species, construction sites to be left in a safe condition during periods of inactivity, providing bat boxes, tree felling outwith bird nesting/breeding period, provision for nature species, ground clearance to be undertaken sensitively to avoid injury to animals, re-instatement of vegetation following maintenance work etc (Appendix 7).

For fauna, construction impacts range from no or negligible to moderate and major adverse, the latter for otters, badgers and bats respectively. These impacts are dependant on the presence, extent and importance of the species, the quality of existing habitat and the degree of disturbance or removal of habitat including the loss of trees/shrubs and other riparian vegetation for shelter or roosting, foraging and feeding, etc.

With operation of the scheme impacts on fauna range from major adverse (bats) to minor beneficial (water vole), again related to the extent and net loss of cover and habitats for foraging and roosting and shelter. In mitigation, replanting and habitat creation to provide nesting and foraging habitat may help to remediate or reduce any identified adverse effects. With removal of invasive species, providing new channels and allowing the river to return to a more natural regime, more suitable bankside habitat may develop for water voles, hence the minor beneficial operational impact identified in the ES.

Moderate adverse construction and operational impacts are identified for non-native invasive plant species based on the nature of the scheme, the existing location and extent of such species and the proposed extent of disturbance to existing vegetation. However, the adoption and successful implementation of a long-term invasive species management plan to spray, remove and dispose of the species within and beyond the scheme area is identified as a mitigation measure to reduce the spread of such species and increase the quality of habitat.

A moderate adverse impact resulting from tree removal is identified during construction. A number of trees are affected and identified for removal, being located in areas where works are proposed, including four trees adjacent to the Garden Centre car park, where the West Forres Embankment with grout curtain will tie into the railway embankment, to an area, approx. 33,540 sq m to be cleared of trees prior to gravel extraction and ground lowering at Bend 2. Even with mitigation measures to identify and remove only marked trees, use temporary fencing to identify areas of trees to be removed/retained and removal of trees outwith the bird breeding season, the number of trees being removed is substantial. In some cases, tree removal will open up the river corridor and change the appearance of the area for example, along the right hand bank between the A96 road and Findhorn Viaduct.

The/

The ES does not record the exact number of trees being removed. In some areas recording of individual tree positions is difficult due to the dense nature of woodland. The ES acknowledges that more trees will be lost than replaced. For example, over Bends 1 – 3 no replanting will be possible in order to maintain the increased channel capacity, or on the embankments or on adjoining agricultural land. However, to mitigate the major adverse impact on trees with operation of the scheme 5265 trees and 111 shrubs (native species) will be planted to replace some but not all of the trees being removed. Apart from semi-mature trees planted along the West Forres Embankment, the majority of trees to be planted are whips (45 – 60 cm) which will take time to become established and reach maturity, and gradually integrate the scheme into the surrounding area. The majority of planting is proposed around the West Forres Embankment and the raising section of A96 road. This will assist not only in mitigation of the works proposed here but also address an objective in the MLP2008 (Forres settlement statement) to improve the western approach into Forres (although no planting between Pilmuir and the embankment is included). SNH recommend further consideration of opportunities for planting and the choice of species (Appendix 5).

E) Impact on Transport and Accessibility

Moray Local Plan 2008 T1, T2, T5, T6, T7, CF3, IMP1, IMP2, IMP3

Transport policies seek to improve strategic and local transport infrastructure and promote sustainable transport, encouraging cycling and walking for work and leisure. Following consultation and subject to conditions as recommended, together with reasons indicated below, the proposals meet planning policy. A Traffic Management Plan taking account of construction traffic impacts on the road network is recommended

With operation of the scheme a minor beneficial impact will result whether in terms of foot and cycle paths being re-instated after construction, or the cessation of flooding on local roads within Forres for example to the east of the raised section of the A96 road or along part of Waterford Road. However, other sections of road will continue to flood for example between the raised part of the A96 road and Findhorn road bridge, and along the road leading to Broom of Moy.

The Findhorn/Pilmuir FAS does not compromise any of the transport infrastructure priorities identified in policy T1. In general, it will bring improvement to the A96 road and rail infrastructure within Forres, which will no longer flood. The roundabout will replace an existing road junction, hence the presumption against a new access on the truck road does not apply (policy T1 and T2 refers). Access to the pumping station and to maintain the various works on the western side of Forres will be taken from the roundabout. Transport Scotland has not objected to the proposals including the raising of the A96 along its current alignment or the roundabout

Two new accesses onto the public road are proposed for the haul tracks to Bends 1 and 3 off the C7E Brodie – Kintessack road. The Transportation Manager has recommended conditions to ensure a safe and suitable access is provided (T2 refers). Whilst the ES does not address the environmental impact of these access junctions but no significant adverse impact is considered to arise.

Waterford Road will be raised to connect into the North Forres Embankment. Unlike the original plans and comments in the ES, the amended proposals do not include a diversion route around this work, hence Waterford Road will be closed temporarily (for approx. 8 weeks) during which time waste facilities available at the Waste Transfer Station will be transferred elsewhere during this period. The requirements for a Traffic Management Plan and a Travel Plan should address traffic issues associated with the construction of the Findhorn/Pilmuir FAS on Waterford Road and elsewhere (Appendix 5).

As part of the scheme design, the use of haul tracks within the site are intended to minimise the environmental impact of construction traffic on public roads and transport material to/from temporary processing sites located within the site. Use of public roads will also be required e.g. to transfer material to the A96 and West Forres Embankments. Following construction the routes will be retained for use during operation and maintenance of the scheme.

Relative to existing traffic volumes, the impact of construction traffic on the strategic road network during construction of the scheme is considered to be negligible. There will be a minor adverse impact associated with the diversion of the A96 based on the duration of the diversion (16 months), additional journey length and slower speed. Proposed measures to mitigate these impacts include minimising construction trips on the A96, construction traffic to avoid peak periods when general traffic levels are high, advanced warning of diversions and installing wheel washing plant to reduce dust and mud from construction vehicles on the public road (Appendix 7).

In addition to the Sustrans route, moderate adverse construction impacts are predicted where sections of river bank along the River Findhorn used for recreation (walkers and anglers) or footpaths such as the Forres Footpath Trust River Findhorn Walk (8 Miles) and Short River Walk (2 miles) become inaccessible or are closed during construction works. This includes the section between the A96 road and Findhorn Viaduct, and along the bank opposite where vegetation removal and gravel extraction is proposed, or the extension of the bridge at Broom of Moy, which connects into various footpaths to/from Forres, etc. The ES notes that these routes will be shut temporarily during construction and it is not be practicable to provide temporary/alternative routes to cross the river, except using the A96 road bridge, as already agreed for the Sustrans route. With operation of the scheme, negligible or minor adverse impacts are predicted as these routes are re-instated or re-aligned, including a footpath now relocated to the south of Greshop House, or enhanced and up-graded (along rear of Garden Centre). However, the appearance of the route may have altered where vegetation has been removed but not replaced or where new planting takes time to become established. Proposed mitigation measures include retaining the routes throughout construction where possible, minimising the length of closure, diversion routes to be signed and advertised, gates across points where paths cross haul routes, etc (Appendix 7).

F) Impact on Air Quality, Noise, Contamination

Moray Local Plan 2008 EP8, EP9, EP12

Following consultation and subject to conditions as recommended (e.g. from Environmental Health) these polices are met.

During construction a negligible adverse input on air quality is predicted for the increase in traffic generated by the scheme on A96 road and Waterford Road. Similarly for traffic accessing the site, a minor adverse impact is predicted due to low volume traffic flows and the short-term nature of the impact. Traffic management arrangement will have a moderate adverse impact on increased emissions as a result of traffic diversions, disruption, delays, volume and speed of traffic and congestion. Emissions from non-road mobile machinery during construction are assessed as a minor adverse impact, because many of the work sites are distant from premises. Proposed mitigation measures include maintaining machinery and best practices to conserve energy (Appendix 7).

Whilst difficult to quantify, dust emissions from construction works are assessed as having minor adverse impact. Proposed mitigation measures include implementing codes of practice to control dust and dust emissions within 200mm of property e.g. at Pilmuir as Broom of Moy.

During construction a number of noise impacts are qualified, including a no noise or vibration impact from construction traffic on the A96 road based on existing levels of traffic. On minor public roads, a moderate adverse impact is predicted at North Pilmuir and major adverse at properties near Mains of Moy and Broom of Moy, ground-borne vibration from vehicle movements in proximity to property is also predicted as major adverse. Vibration from traffic travelling on haul tracks and also during their construction at Broom of Moy is also predicted as a moderate to major adverse impact. A number of mitigation measures are indicated includes use of speed limits, maintaining surfaces in good condition, best practice operational controls, pre-construction surveys and effective public relations to address any perceived impacts (Appendix 7).

Diversion of the A96 road is predicted to have a negligible to moderate adverse noise impact, principally to the rear of properties on Califer Road, where noise barriers are proposed to mitigate and achieve sound attenuation, whilst a negligible adverse impact is identified for constructing the Pilmuir drainage channel. Other mitigation measures include use of best practice construction methods and temporary fence along edge of haul track at Broom of Moy (Appendix 7).

Night-time pumping to remove water from excavations during construction may be required e.g. for Pilmuir drainage channel and pumping station hence the predicted major adverse impact to property at Pilmuir and at Broom of Moy. Mitigation measures may include the use of reduced noise ("quiet") pumping equipment and temporary noise barriers. Daytime operation of the pumping station at Pilmuir is predicted to have no adverse impact on nearby property but a minor to moderate adverse impact during night-time operation. Whilst the use of resilient mountings for the equipment is proposed to minimise noise impacts, further assessment will be required once details of the pumping equipment are known. The Environmental Health Manager has recommended conditions regarding these and other related issues.

Two sites are identified as having a risk of contamination. These require further investigation, including remediation proposals, where appropriate in accordance with details to be submitted to and approved by the Council's Contaminated Land Section in order to satisfy the requirements of policy EP9. This matter will be addressed by condition.