Permit[1]

Environmental Protection Act 1994

Environmental authority

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Permit[1] number: EPPR00319313

Environmental authority takes effect 18 November 2013

The first annual fee is payable within 20 business days of the effective date.

The anniversary date of this environmental authority is the same day each year as the effective date. An annual return and the payment of the annual fee which is currently $8,911.50 will be due each year on this day.

Environmental authority holder(s)

Name	Registered address
Fullshare Laguna Management Pty Ltd	Suite 1, Level 6 499 St Kilda Road MELBOURNE VIC 3004

Environmentally relevant activity and location details

Environmentally relevant activity(ies)	Location(s)
16-(1b) Dredging >10000t but <100000t yr 16-(2b) Extractive >100000t but <1000000t yr 16-(3b) Screening >100000t but <1000000t yr 63-(1b)(i) Sewage treatment >100 to 1500EP – with treated effluent discharged to an infiltration trench or irrigation scheme.	Laguna Quays Marina - Lot Adj 14 Plan SP123417 Laguna Quays Quarry - Lot 3 Plan SP138999 Laguna Quays Resort - Lot 1 on Plan RP846432, Lot 15 on Plan SP123417, Lot 1 on Plan RP846432, Lot 15 on Plan SP201850, Lot 0 on Plan GTP107216, Lot 13 on Plan SP123417, Lot 0 on Plan GTP107153 and Lot 0 on Plan GTP107178.

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an environmental authority as to the scale, intensity or manner of carrying out an ERA, then the conditions prevail to the extent of the inconsistency.

[1] Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation

An environmental authority authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the authority specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land

It is a requirement of the EP Act that if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.

Signature	Date
KMClarke	18 Nov. 2013

Katrina Clarke
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Alisha Stewart
ES - Reg Serv - Central West - Mackay
PO Box 2001
22-30 Wood Street
MACKAY QLD 4740
Phone: (07)49996885
Fax: (07)49996904
Email: alisha.stewart@ehp.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Conditions of environmental authority

The permit consists of the following parts:

Part 1 – Standard conditions.....2
Part 2 – Conditions specific to extractive activities.....3
Part 3 – Condtions specific to sewage treatment.....4
Part 4 – Conditions specific to dredigng activities.....4
Definitions.....4

KMC 18/11/13

Part 1 – Standard conditions

Location: Laguna Quays Marina - Lot Adj 14 Plan SP123417
Laguna Quays Quarry - Lot 3 Plan SP138999
Laguna Quays Resort - Lot 1 on Plan RP846432, Lot 15 on Plan SP123417, Lot 1 on Plan RP846432, Lot 15 on Plan SP201850, Lot 0 on Plan GTP107216, Lot 13 on Plan SP123417, Lot 0 on Plan GTP107153 and Lot 0 on Plan GTP107178.

Relevant activity/ies:

16-(1b) Dredging >10000t but <100000t year
16-(2b) Extractive >100000t but <1000000t year
16-(3b) Screening >100000t but <1000000t year
63-(1b)(i) Sewage treatment >100 to 1500EP – with treated effluent discharged to an infiltration trench or irrigation scheme.

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
G1	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicably possible, or at most, within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions taken.
G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
G3	**Records** All information and records that are required by the conditions of this environmental authority must be kept for a period of at least 5 years and provided to the **administering authority** upon request.
G4	Storage of chemicals and fuels in bulk or in containers of greater than 15 litres must be within a secondary containment system and releases from the containment system controlled in a manner that prevents environmental harm.

KMC 18/11/13

G5	**Site Based Management Plan** From commencement of the activity, a Site Based Management Plan (SBMP) must be implemented. The SBMP must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused. The SBMP must also provide for the review and 'continual improvement' in the overall environmental performance of all Environmentally Relevant Activities that are carried out. The site based management plan must address the following matters: (a) Environmental commitments - a commitment by senior management to achieve environmental goals. (b) Identification of environmental issues and potential impacts. (c) Control measures for routine operations to minimise likelihood of environmental harm. (d) Contingency plans and emergency procedures for non- routine situations. (e) Organisation structure and responsibility. (f) Effective communication. (g) Monitoring of the contaminant releases. (h) Conducting environmental impact assessments. (i) Staff training. (j) Record keeping. (k) Periodic review of environmental performance and continual improvement.
G6	The SBMP must not be implemented or amended in a way that contravenes any condition of this approval.
G7	**Complaint Response** All complaints received must be recorded including investigations undertaken, conclusions formed and action taken. This information must be made available to the administering authority on request.

Agency interest: Air	
Condition number	**Condition**
A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **nuisance sensitive place** or **commercial place**.

Agency interest: Water	
Condition number	**Condition**
WA1	Other than as permitted within this authority, contaminants must not be released from the site to any **waters** or the bed and banks of any **waters**.

KMC 18/11/13

Agency interest: Noise	
Condition number	**Condition**
N1	Noise from activities must not cause an environmental nuisance at any noise sensitive or commercial place.
Agency interest: Waste	
Condition number	**Condition**
WS1	Waste must only be removed from the site by a transporter lawfully able to transport it to a place lawfully able to receive it.

Part 2 – Conditions specific to extractive activities

Location: Via Conder Parade, Midge Point QLD

Lot 3 on Plan SP138999

Relevant activity/ies:

16-(2b) Extractive >100000t but <1000000t yr
16-(3b) Screening >100000t but <1000000t yr

Agency interest: Water	
Condition number	**Condition**
WA1	A system of suitable diversion drains or embankments must be constructed to divert uncontaminated surface waters away from any exposed areas.
WA2	Prevent the release of stormwater runoff that has been in contact with any contaminants at the site to any waters.
WA3	Prevent erosion that may result in the release of sediment to waters.
WA4	Contaminants must only be released to waters from the release points and in compliance with the release limit listed in Part 2 Table 1.

KMC 18/11/13

<table>
<tr><td>WA5</td><td>Conduct and keep records of contaminant releases to waters from the release points, frequency and for the parameter specified in Part 2 Table 1. All determinations of the quality of contaminants released must be:
- performed by a person or body possessing appropriate experience and qualifications to perform the required measurements; and
- made in accordance with the methods prescribed in the latest edition of the administering authorities Water Quality Sampling Manual.
Part 2 Table 1 – Release Quality Characteristic Limits
<table>
<tr><td></td><td></td><td></td><td colspan="4">Release Limit</td><td></td></tr>
<tr><td>Release/ Monitoring Point</td><td>Discharge Location</td><td>Quality Characteristics</td><td>Min</td><td>50th Percentile</td><td>80th Percentile</td><td>Max</td><td>Monitoring Frequency</td></tr>
<tr><td>Spillway of sediment dams</td><td>Settlement dams</td><td>pH</td><td>6.5</td><td>-</td><td>-</td><td>9</td><td>Weekly during discharge</td></tr>
<tr><td>Spillway of settlement dams</td><td>Settlement dams</td><td>Suspended solids</td><td>-</td><td>-</td><td>-</td><td>30mg/L</td><td>Weekly during discharge</td></tr>
</table>
</td></tr>
<tr><td colspan="2">Agency interest: Land</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>L1</td><td>All disturbed areas must be progressively profiled and stabilised (e.g. borrow pits, stockpile and screening areas) to minimise erosion.</td></tr>
<tr><td>L2</td><td>Exposed areas that will not be used for quarrying activities must be revegetated with species native to the area.</td></tr>
</table>

KMC 18/11/13

Part 3 – Conditions specific to sewage treatment plant activities

Location: Lot 1 on Plan RP846432, Lot 15 on Plan SP123417, Lot 1 on Plan RP846432, Lot 15 on Plan SP201850, Lot 0 on Plan GTP107216, Lot 13 on Plan SP123417, Lot 0 on Plan GTP107153 and Lot 0 on Plan GTP107178.

Relevant activity/ies:

ERA 63 1 (b) (ii) Sewage treatment: >100 – 1500EP with treated effluent discharged to an infiltration trench or irrigation scheme.

Agency interest: General	
Condition number	**Condition**
G1	**Annual Monitoring Report** An annual monitoring report must be provided to the administering authority with the annual return. This report shall include but not be limited to: - a summary of the previous twelve (12) months monitoring results obtained under any monitoring programs required under this authority and, in graphical form showing limits, a comparison of the previous twelve (12) months results to both this authority limits and to relevant prior results; and - an evaluation/ explanation of the data from any monitoring programs; and - a summary of any record of quantities of releases required to be kept under this authority; and - a summary of the record of equipment failures or events for any site under this authority; and - an outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.
G2	**Contaminant and sewage pump station** Contaminant pumping stations must be fitted with stand-by-pumps and pump failure alarms as well as high- level alarms to warn of imminent pump station overflow. All alarms must be able to operate without mains power.
G3	Pump failure alarms must be detectable by the maintenance staff, in such a manner as to facilitate compliance with general environmental duty.
G4	A list of pump stations associated with this part of the environmental authority must be maintained by the holder of the authority and by made available to the administering authority when requested.

KMC 18/11/13

G5	**Pond Conditions** All ponds used for the storage or treatment or contaminants, sewage or wastes at or on the authorised place must be constructed, installed and maintained: - so as to minimise the likelihood of any release of effluent through the bed or banks of the pond to any waters (including groundwater); and - so that a freeboard of not less than 0.3 metres is maintained at all times, except in emergencies; and - so as to ensure the stability of the ponds construction.
G6	Suitable banks and/ or diversion drains must be installed and maintained to exclude stormwater runoff from entering any ponds or other structures used for the storage or treatment of contaminants or wastes.
G7	An irrigation management plan must be developed, implemented and maintained which addresses at least the following: - the efficient application of effluent to land utilising best practice methods; - the control of salinity and sodicity in any receiving soils; - the minimal soil structure degradation; - the control of nutrient and heavy metal build up in both soils and subsoil from effluent and other sources; - the prevention of subterranean flows of effluent to waters; - the prevention of impacts on the groundwater resource through infiltration; - the prevention of effluent run-off from receiving soils by limiting application rates and/or the use of tail-water dams; - the prevention of surface ponding in areas accessible to the general public; - the prevention of spray drift or overspray from effluent disposal areas; - the prevention of damage to native vegetation; - maximisation of health and safety protection in relation to effluent handling and irrigation; and - defines the effluent irrigation area.
Agency interest: Water	
Condition number	**Condition**
WA1	**Release to Waters** Contaminants must not be released from the site to any waters or the bed and banks of any waters.

KMC 18/11/13

WA2	**Stormwater Management** There must be no release of stormwater runoff that has been in contact with any contaminants at the site to any waters, roadside gutter or stormwater drain.

Agency interest: Land

Condition number	Condition
L1	The only contaminants permitted to be released to land are treated effluents and stormwater to the areas listed: turf farm, golf course, park, lawns, horse paddock and gardens of the Laguna Quays Resort; in compliance with the limits levels stated in Part 3 Table 1 Release Limits – Land and the conditions of this authority.

Part 3 Table 1 – Release Limits - Land

	Release Limit				
Quality Characteristics	**Minimum**	**50th Percentile**	**80th Percentile**	**Maximum**	**Median**
5 day Biological Oxygen Demand	-	-	-	20 mg/L	-
Suspended Solids	-	-	-	30mg/L	-
Faecal Coliforms	-	-	-	1000	400
Total Phosphorus	-	-	-	15mg/L	-
Total Nitrogen	-	-	-	20mg/L	-
pH	6.5	-	-	8.5	-

L2

The irrigation of effluent must be carried out in a manner such that:

- vegetation is not damaged;
- soil erosion and soil structure damage is avoided;
- there is no surface ponding of effluent;
- percolation of nutrients, within irrigated effluent, beyond the plant root zone is prevented;
- the capacity of the land to assimilate nitrogen, phosphorus, salts, organic matter as measured by oxygen demand and water is not exceeded; and
- the quality of groundwater is no adversely affected.

KMC 18/11/13

L3	Notices must be prominently displayed on any effluent irrigation area warning the public that the area is irrigation with effluent and not to use or drink the effluent. These notices must be maintained in a visible and legible condition.
L4	Conduct and keep records of any monitoring programs of contaminant releases from the treatment plant at the monitoring points, frequency and for the parameters specified in Part 3 Table 2 – Monitoring program.
L5	Monitoring must be undertaken and records kept of a monitoring program of contaminants releases to the irrigation area at the monitoring points, frequency and for the parameters specified in Part 3 Table 2 – Monitoring Program.

Part 3 Table 2 – Monitoring Program

Monitoring Point	**Quality Characteristics**	**Units**	**Frequency**
Outlet from pond 6	5 day Biological Oxygen Demand	mg/L	Monthly during irrigation discharges
Outlet from pond 6	Suspended Solids	mg/L	Monthly during irrigation discharges
Outlet from pond 6	Faecal Coliforms	colonies/100ml	Monthly during irrigation discharges
Outlet from pond 6	Total Phosphorus	mg/L	Monthly during irrigation discharges
Outlet from pond 6	Total Nitrogen	mg/L	Monthly during irrigation discharges
Outlet from pond 6	pH		Monthly during irrigation discharges
Outlet from pond 7	5 day Biological Oxygen Demand	mg/L	Monthly during irrigation discharges
Outlet from pond 7	Suspended Solids	mg/L	Monthly during irrigation discharges
Outlet from pond 7	Faecal Coliforms	colonies/100ml	Monthly during irrigation discharges
Outlet from pond 7	Total Phosphorus	mg/L	Monthly during irrigation discharges
Outlet from pond 7	Total Nitrogen	mg/L	Monthly during irrigation discharges
Outlet from pond 7	pH		Monthly during irrigation discharges

KMC 18/11/13

L6	The daily volume of contaminants released to land must be determined or estimated by an appropriate method, for example a flow meter and records kept of such determinations and estimates.
L7	When conditions prevent the irrigation of treated effluent to land (such as during or following rain events), the contaminants must be directed to wet weather storage or alternative measures must be taken to store/ lawfully dispose of effluent (such as taking off site to another treatment plant or sewer). A record must be kept of any removal or discharge off site, including destination, transporter, dates and volumes.
L8	Irrigation of treated effluent must not result in run-off beyond the boundary of any irrigation areas defined in the Irrigation Management Plan. There must not be any release of effluent from any wet weather storage.

Part 4 – Conditions specific to dredging activities

Location: Laguna Quays Marina

Adjacent to Lot 14 on Plan SP123417

Relevant activity/ies:

ERA 16 1(b) – dredging, in a year, more than 10000t to 1000000t of material

Agency interest: General	
Condition number	**Condition**
G1	**Scope of Approval** This environmental authority approves the removal of a total of 150 000 cubic metres of material from the approved navigation channel with a maximum annual total of 50 000 cubic metres.
G2	The only form of dredging to be carried out is maintenance dredging using a cutter suction dredge.
G3	The only area permitted to be dredged under this authority is the approved navigation channel for Laguna Quays Marina.
G4	The placement of dredged spoil may only occur in the sedimentation ponds located on Lot 14 on Plan SP123417.

KMC 18/11/13

Agency interest: Water

Condition number	Condition
WA1	**Monitoring** Monitoring must be undertaken and records kept of contaminant releases to waters from the discharge location for the parameters and not less frequently than specified in Part 4 Table 1 Release Limits. All determinations of the quality of contaminants released must be: - made in accordance with the methods prescribed in the latest edition of the administering authorities Water Quality Sampling Manual; and - carried out on samples that are representative of the discharge. Part 4 – Table 1 Release Limits

Monitoring Point	Discharge Location	Quality Characteristics	Release Limit	Monitoring Frequency
B	Discharge from primary pond	Turbidity	Must not exceed 2 NTU above "background level" where "background level" is less than 20NTU or ten per cent greater than "background level" where "background level" is greater than 20NTU.	Daily
B	Discharge from primary pond	pH	6.5- 8.5	Daily

For the purposes of this condition a "background level" for a water quality characteristic is the value measured at a background sampling point in the receiving waters not affected by the activity.

KMC 18/11/13

<table>
<tr><td>WA2</td><td>Monitoring is to be undertaken to determine the impact of the dredge on the turbidity of the water surrounding the dredge. Monitoring will be undertaken in accordance with Part 4 – Table 2 Impact Monitoring.

Part 4 – Table 2 Impact Monitoring
<table>
<tr><th>Monitoring point</th><th>Quality Characteristics</th><th>Quality Limit</th><th>Monitoring Frequency</th></tr>
<tr><td>50m downstream from the operating dredge at the bottom of the water column.</td><td>Turbidity</td><td>Must not exceed 5 NTU above "background level" where "background level" is less than 20NTU or ten per cent greater than "background level" where "background level" is greater than 20NTU.</td><td>Daily</td></tr>
</table>
For the purposes of this condition a "background level" is that which is measured 50 metres up current from the operating dredge.</td></tr>
<tr><td>WA3</td><td>If impact monitoring shows that the dredging activity is resulting in the surrounding water having a turbidity higher than that in Part 4 – Table 2 Impact Monitoring then dredging must cease until turbidity is within the limits.</td></tr>
<tr><td>WA4</td><td>If the limits in Part 4 – Table 1 Release Limits or Part 4 – Table 2 Impact Monitoring are exceeded then an exception report must be submitted to the administering authority as soon as possible. The report must include:
- the date and time the monitoring was undertaken;
- the suspected cause of the excedence; and
- actions taken to prevent further excedences and mitigate any further excedences.</td></tr>
<tr><td>WA5</td><td>Erosion Protection Measures and Sediment Controls

Prevent the release of sediment to waters or a build-up of sediment in any stormwater drain.</td></tr>
<tr><td>WA6</td><td>Release to Waters

Contaminants must only be released to waters from the discharge location and in compliance with the release limits listed in Part 4 Table 1 Release Limits.

Discharge Location B – namely release of water from settled dredged material from the primary settling pond to the secondary settling pond within 2m downstream from the discharge point.</td></tr>
<tr><td>WA7</td><td>Visual monitoring of the sediment control structures must be undertaken at least on a daily basis to ensure their effectiveness in preventing the release of water that exceeds the limits stated in Part 4 – Table 1 Release Limits.</td></tr>
<tr><td>WA8</td><td>Stormwater Management

There must be no release of stormwater runoff that has been in contact with any contaminants at the site to any waters, roadside gutter or stormwater drain.</td></tr>
</table>

KMC 18/11/13

Agency interest: Land	
Condition number	**Condition**
L1	All reasonable and practicable measures must be taken to minimise dust lift- off from the settling ponds once dredging has ceased.
Agency interest: Waste	
Condition number	**Condition**
WS1	**Management of Dredged Material** Prior to use of the disposal area, a statement shall be provided to the Mackay office of the administering authority by a Registered Professional Engineer of Queensland certifying that the bund walls are constructed adequately to contain dredged material, including water and to withstand the loadings and conditions that they are likely to be subjected to.
WS2	All ponds used for the storage of dredge spoil must be constructed, installed and maintained: - to minimise the likelihood of any release of any contaminants through the bed or banks of the pond to any waters (including groundwater); - so that a freeboard of not less than 0.5 metres is maintained at all times; - to ensure that stability of the pond's construction.
WS3	Dredge spoil must not be removed from the settling ponds without the approval of the administering authority.

KMC 18/11/13

Definitions

Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document. Applicants should note that where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

Administering authority means the Department of Environment and Heritage Protection or its successor or predecessors.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

Background means noise, measured in the absence of the noise under investigation, as $L_{A90,T}$ being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than 15 minutes, using Fast response.

Boundary means within 1m of the cadastral **boundary** of the approved place.

Commercial place means a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

Environmental nuisance as defined under Chapter 1 of the *Environmental Protection Act 1994.*

Environmental value as defined under Chapter 1 of the *Environmental Protection Act 1994.* $L_{Aeq\ adj,T}$ means the adjusted A weighted equivalent continuous sound pressure level **measures** on fast response, adjusted for tonality and impulsiveness, during the time period T, where T is measured for a period no less than 15 minutes when the **activity** is causing a steady state noise, and no shorter than 1 hour when the approved **activity** is causing an intermittent noise.

$MaxL_{pA,T}$ means the maximum A-weighted sound pressure level measured over a time period T of not less than 15 minutes, using Fast response.

Measures has the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competency.

Noxious means harmful or injurious to health or physical well-being.

Offensive means causing offence or displeasure; is unreasonably disagreeable to the sense; disgusting, nauseous or repulsive.

Prescribed contaminants means contaminants listed within Schedule 9 of the Environmental Protection Regulation 2008.

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
b) a motel, hotel or hostel; or
c) a kindergarten, school, university or other educational institution; or
d) a medical centre or hospital; or

KMC 18/11/13

e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or

f) a public thoroughfare, park or gardens; or

g) for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.

Substantial low frequency noise means a noise emission that has an unbalanced frequency spectrum shown in a one-third octave band measurements, with a predominant component within the frequency range 10 to 200 Hz. It includes any noise emission likely to cause an overall sound pressure level at a noise sensitive place exceeding 55 dB(Z).

Waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

You means the holder of the environmental authority.

END OF PERMIT

KMC 18/11/13